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Thomas Easterly, c/o Janet Pittman
Rules Development Branch
Office of Legal Counsel, MC65-46
Indiana Department of Environmental Management
100 North Senate Avenue
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RE: 2010 Draft 303(d) List of Impaired Waters

> "***The problems of Indiana's drainage code are a lot like the problems of Indiana in general - anachronistic, obsolete institutional structures - lack of imagination - lack of skills and professionalism both in government and in the press - 'good-ole-boyism'. The tendency of Hoosiers to keep 'doin' what we always done' has led the state into a downward spiral of brain drain, eroding quality of life, and lost opportunities.***"
>
> - from *Abundance Breeds Contempt - Perspectives on Indiana Drainage Law & Policy* by Marty Lucas.

Mr. Easterly:

According to data included in the Notice of Public Comment for this matter, the general quality of the surface waters of Indiana has declined since 2008. The total number of impairments has risen from 2,682 to 2,882. Total impaired stream miles has increased from 9,569 to 13,011.

The Commissioner of IDEM shares a great deal of responsibility for this situation. You dissolved your Office of Enforcement in December 2008 – although that information does not appear to have yet been brought forward on your web site. You instituted a weak "Compliance and Enforcement Response Policy". According to a Legal Environmental Aid Foundation statement of July 2009, IDEM's enforcement changes are "inconsistent with federal guidance on protection of public health and environment."

The finalization of a sufficient anti-degradation policy by IDEM has also been problematic. Several groups have petitioned the EPA to find that your draft guidelines do not meet Clean Water Act standards. Your permitting and mitigation processes have been skewed to favor polluters and to exclude public comment and scrutiny. And you have failed to come up with a rational plan to curb mercury pollution from coal-fired power plants.

I have personally witnessed and experienced this anti-enforcement, anti-citizen, pro-degradation ideology and agenda of the current state administration in practice, furthering the destruction of the environment right here in Johnson County, in recent weeks. These incidents have to do with an obscure, generally misunderstood, and mostly unregulated practice in Indiana, having to do with the construction and maintenance of "legal drains." My comments at this time will therefore apply to the archaic and regressive set of statues known as "Indiana drainage code", and I intend to detail as best I can to you, and others who will read my comments, that the State of Indiana is perpetuating this 19th-century body of law and practice, knowing full well that it conflicts with the Clean Water Act and other laws and regulations, to the great and increasing detriment of the public, our health and safety, our environment, and our wildlife.

Indiana drainage code is used by county drainage boards, which are composed of appointed officials. Elected county surveyors implement the policies by constructing and maintaining so-called "legal drains." Those works were originally intended primarily for the drainage of farm fields. Much of that was accomplished by draining wetlands, clearing forests, etc. Bizarrely, although Indiana was cleared, over-cleared, drained, and over-drained many decades ago, and although our old "frontier" was conquered and civilized by our great-grandfathers and

beyond, that process still proceeds apace under Indiana drainage code! While I have not been able to survey the entire state to determine the extent of the problem, I, and IDEM's own documentation, can attest to the fact that this process is going great guns in Johnson County!

Besides the continuation of universally poor and destructive practices, the worst aspect of the application of Indiana drainage code in Johnson County has to do with the County Surveyor's mindless persistence in destroying natural streams. In the past, it was common practice to clearcut, channelize, and armor streams and rivers in dealing with issues of drainage and flood control. And we've seen the results in terms of exacerbated disasters and degraded environment. Those practices are now avoided by modern engineers. However, the Johnson County Surveyor, who apparently has no expertise whatsoever outside of, perhaps, surveying, insists on wielding dictatorial control over the natural streams which remain a legacy of circuit court filings over a hundred years ago, which declared them “legal drains.”

Frankly, I am baffled as to how, in this day and age, County Surveyors in Indiana are given such free reign, practically carte blanche, to alter and degrade our environment, and even put lives and property in danger, as happened in Johnson County during the June 7, 2008 flood disaster. The only training County Surveyors in Indiana are required to have is encoded in IC 36-2-12-2.5, which allows them to, theoretically, be paid for 1 year and 364 days after being sworn in while still completely unqualified to live up to the title of the office, then take a 24-hour crash-course, and be thereby be minimally entitled to the position. (Which is still even looser than requirements enacted last year for County Coroners, who previously were not required to prove any qualification whatsoever. What a state we live in.) I have not seen the curriculum of this 24-hour course but I would wager that it does not include any instruction on the environment, water quality, hydrology, flood control, engineering, etc. The position of County Surveyor should be filled based upon hiring (not electing) the most qualified applicant, and the work restricted to surveying, period.

It is indisputable that Indiana drainage code is in direct opposition to the Clean Water Act and 327 IAC 2. The primary reason is that the standard practices of County Surveyors, at least as demonstrated in Johnson County, **increase water pollution and the overall degradation of water quality**. Healthy streams with good water quality stay that way through natural processes where the effects of human activity are minimal, or else those processes can be enhanced when necessary, due to the adverse effects of human activity. Examples of the latter are agricultural and industrial activity and the use of waterways for treated effluent disposal. The processes that keep streams healthy and water quality good have been scientifically studied and are well understood. As are the un-natural processes which have the opposite effect.

SEE: **33 USC 1251 Sec.101(a)(2)** “it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved..." Also: **33 USC 1251 Sec.303(2)(A)** “Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act.” I would wager that, every time that the State has revised or adopted water quality standards, the Administrator has not been informed of the conflicts posed by Indiana drainage code. Nor has the State, in those processes, analyzed those conflicts. Indiana's own environmental law, in attempting (but not yet reaching) compliance with the Clean Water Act, is thorough and explicit:

327 IAC 2-1-1.5 Water quality goals
Sec. 1.5. The goal of the state is to restore and maintain the chemical, physical, and biological integrity of the waters of the state.

327 IAC 2-1-2 Maintenance of surface water quality standards
Sec. 2. The following policies of nondegradation are applicable to all surface waters of the state:
(1) For **all** waters of the state, existing beneficial uses shall be maintained and protected. No degradation of water quality shall be permitted which would interfere with or become injurious to existing and potential uses.
(2) All waters whose existing quality exceeds the standards established herein as of February 17, 1977, shall be maintained in their present high quality unless and until it is affirmatively demonstrated to the commissioner that

limited degradation of such waters is justifiable on the basis of necessary economic or social factors and will not interfere with or become injurious to any beneficial uses made of, or presently possible, in such waters. In making a final determination under this subdivision, the commissioner shall give appropriate consideration to public participation and intergovernmental coordination.

327 IAC 2-1-3 Surface water use designations; multiple uses
Sec. 3. (a) The following water uses are designated by the water pollution control board:
(1) Except as provided in subsection (c), surface waters of the state are designated for full body contact recreation as provided in section 6(d) of this rule.
(2) All waters, except as described in subdivision (5), will be capable of supporting:
(A) a well-balanced, warm water aquatic community; and
(B) where natural temperatures will permit, put-and-take trout fishing.
(b) Where multiple uses have been designated for a body of water, **the most protective of all simultaneously applicable standards will apply**.

327 IAC 2-1-6 Minimum surface water quality standards
Sec. 6. (a) The following are minimum surface water quality conditions:
(1) **All surface waters at all times and at all places**, including waters within the mixing zone, shall meet the minimum conditions of being free from substances, materials, floating debris, oil, or scum attributable to municipal, industrial, agricultural, and other land use practices...

327 IAC 2-1-12 Incorporation by reference
Sec. 12. The following materials have been incorporated by reference into this rule...:
(1) Clean Water Act (CWA) 33 U.S.C. 1251 et seq. in effect July 1, 2004...
(2) Code of Federal Regulations (40 CFR 136) in effect July 1, 2004...

With such a strong body of federal and state law, it is incredible that the activities of the Johnson County Surveyor proceed almost entirely unhindered, and then only briefly, by these overarching laws. Simply looking at satellite imagery shows the rampant damage already done across perhaps half of the county! And yet, two applications have been made for entirely unnecessary projects within the city limits of Franklin, and a third was submitted for completely new construction in a stream which until last summer was unaltered and functioning naturally – until work was done there illegally, without authorization! I will discuss these projects, and their lack of regulation, in more detail below.

According to recent data which I've been able to find on the Web - older data likely being unavailable online - many of Johnson County's legal drains and streams are being declared "impaired" by pollutants on a bi-annual basis when data is compiled. (Johnson County is in a region of Indiana with one of the highest percentages of impaired surface waters in the nation.) At least the two largest “legal drains” in Franklin have exceeded Total Maximum Daily Load (TMDL) for E Coli in the last two cycles, and are on the draft 2010 list as well. I would wager that if we were to test all of the county's legal drains at the same time, mid-year or so (in an expanded version of IDEM's regular sampling program), we would find that the larger ones, certainly - perhaps 8 out of 10, or more, of the total number - would exhibit low water quality and/or impairment, and those factors could be correlated with the amount of "maintenance" the “legal drain” has received. And this is obviously why the larger streams in Johnson and adjoining counties - Youngs Creek, Sugar Creek, White River, Big Blue River - are consistently making the list: That has a great deal to do with the fact that the county's legal drains empty into them.

The relationship between traditional agricultural drainage practices (tile drains, open ditches) and the contamination of waterways by pathogens is well established. Bacteria from agricultural operations may originate from livestock or the application of manure or even urban effluent (a.k.a. biosolids) used as fertilizer.

According to a Sept. 18, 2009 article, *Health Ills Abound as Farm Runoff Fouls Wells*, in the New York Times: "Agricultural runoff is the single largest source of water pollution in the nation's rivers and streams, according to the E.P.A. An estimated 19.5 million Americans fall ill each year from waterborne parasites, viruses or bacteria, including those stemming from human and animal waste, according to a study published last year in the scientific journal Reviews of Environmental Contamination and Toxicology."

However, it is also well established that there are methods which can be learned and applied in order to curb the spread of pathogens from agricultural and other lands. IDEM, in it's 2005 study of the Flatrock-Haw Creek Watershed, stated: "Nonpoint source pollution, which is the primary cause of *E. coli* impairment in this watershed, can be reduced by the implementation of "best management practices" (BMPs). BMPs are practices used in agriculture, forestry, urban land development, and industry to reduce the potential for damage to natural resources from human activities" I will discuss some of these BMPs (which are the opposite of Surveyor Lechner's "Worst Management Practices") in further detail below.

Of course, water quality can't be judged solely by which streams do or do not make the Section 303 impaired waters list. Water quality can also be measured by its ability to support aquatic life. According to EPA Region 5 State of the Waters 2002: "Measuring aquatic community health provides direct information about the success of efforts to protect and restore the region's waters." Below is an excerpt from the chapter entitled "Investigation of Water Quality Issues and Watershed Benchmarks" in the 2003 *Youngs Creek Watershed Management Plan*, which was funded by a **Clean Water Act** Section 319 grant and produced by the Johnson County Soil & Water District (SWCD):

"The Qualitative Habitat Evaluation Index (QHEI) was developed by the Ohio EPA to provide a qualitative evaluation of the stream habitat by measuring the physical features that affect aquatic communities. This index provides information on a stream's ability to support fish and macroinvertebrate communities (Rankin, 1989). The QHEI is composed of six parameters that are related to stream fish communities: substrate, instream cover, channel morphology, riparian and bank conditions, pool and riffle quality, and gradient.

In order to more thoroughly examine the watershed, a QHEI was conducted at 18 sites throughout the watershed during November 2001 and August 2002... Although the QHEI is typically used in conjunction with fish sampling, these results can be used to characterize instream habitat throughout the watershed. The results show that most sites located in agricultural areas north of Franklin are classified as "not supporting." In addition, most sites that were found to be "not supporting" are located within **legal drains**. In general, *these reaches are straight, an indication of channelization, and were designed to move water away from the land quickly. Due to their straight nature and lack of streamside vegetation, they have little opportunity to score high on the QHEI parameter*. The sites classified as "partially supporting" occur on stream reaches that have increased channel morphology. On these channels, streambanks are more stable, and sinuosity increases. The two sites classified as "fully supporting" are located on Youngs Creek, south of Franklin. Youngs Creek is fairly wide in this area and has abundant streamside vegetation, instream cover, and well-developed riffle–run–glide reaches..." (SEE: 33 USC 1251 Sec.101(a)(2), ibid.)

To summarize the foregoing information, we should first understand that the practices allowed and encouraged by Indiana Drainage Code, used by the Johnson County Surveyor, and partially involved in the proposed project, include:

1. **DENUDING**: Natural streams are stripped of all riparian habitat; banks of waterways (and sometimes their beds) are generally kept clear of plant growth, often through the use of herbicides;
2. **CHANNELIZATION**: Natural stream courses are altered so as to be as straight as possible;
3. **BANK RECONSTRUCTION**: Material such as rip-rap is applied in the mistaken belief that it will stabilize waterway banks better than vegetation.

The second conclusion of this summary is that the practices listed above result in higher levels of pathogens in waterways, plus a lessened ability to support aquatic life, and thus a **lower level of water quality**.

Obviously, the best approach to maintaining or improving water quality, at least in Johnson County, is to **leave the waterway alone**. And in as natural a state as possible. As Surveyor Lechner has demonstrated over decades - as I have documented at http://www.ccjcin.org/ditches.htm - his methods involve the highest level of alteration to and destruction of natural systems in the waterways under his "maintenance." His worst practice is the complete removal of riparian zones and plant buffers.

An extensive body of information is available from authorities ranging from the SWCD, the State of Indiana, Purdue and other agricultural/engineering colleges nationwide, federal agencies, etc., on the complete package of benefits which riparian zones (or at least vegetative buffering strips) provide. These benefits are very well

expressed in an excerpt from the *City of Franklin Comprehensive Plan*, specifically Chapter 4, Natural Environment, which on page 4-3 under Goal One states: "Promote the protection and enhancement of local land-based resources, such as floodplains, woodlots, riparian corridors, street trees, and soils." And goes on to state under Policy 3 - "Preserve and Enhance Riparian Areas: Preserve and enhance key components of riparian areas where possible to maintain water quality and wildlife habitats."

The reasons for this are explained on page 4-5 of the Plan, "Why are Riparian Areas Important? Land along waterways have significant ecological and aesthetic value which enhances the natural environment of a community. The presence of riparian areas also adds value to properties with water access, as they as they are often prime locations for development. Many communities depend upon local rivers and streams for recreation, drinking water, and natural resource areas. **The loss of riparian areas along such waterways is a major cause of decreases in water quality and loss of wildlife habitat.**"

As far as taxpayers are concerned, the main advantages are that these solutions are free, if left untouched to begin with; cheap, if re-established and allowed to function normally in perpetuity; and money-saving, versus meddling by County Surveyors and others, which is costly to begin with, is endlessly repeated at multiplied expense, and which results mind-boggling and perhaps unquantifiable costs in terms of both damage to the environment and the nullification of other costly environmental gains, and in costs from the exacerbation of disaster!

Preventing further destruction to county streams, the preservation of surviving riparian zones, and the restoration of areas damaged by the Johnson County Surveyor, primarily through the re-establishment of riparian zones, will result in dramatic improvements to the quality of water in that waterway and downstream. These steps would **comply** with state and federal laws, mandates, and recommendations. Recommendations which are made repeatedly in IDEM's own watershed documents! Examples:

> "Potential Future Activities: Nonpoint source pollution, which contributes to the E. coli impairment in this watershed, can be reduced by the implementation of "best management practices" (BMPs). BMPs are practices used in agriculture, forestry, urban land development, and industry to reduce the potential for damage to natural resources from human activities. A BMP may be structural, that is, something that is built or involves changes in landforms or equipment, or it may be managerial, that is, a specific way of using or handling infrastructure or resources. BMPs should be selected based on the goals of a watershed management plan. Livestock owners, farmers, and urban planners can implement BMPs outside of a watershed management plan, but the success of BMPs would be enhanced if coordinated as part of a watershed management plan. Following are examples of BMPs that may be used to reduce E. coli runoff:
> **Riparian Area Management** - Management of riparian areas protects stream banks and river banks with a buffer zone of vegetation of grasses, legumes, or trees."
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> Source: *Total Maximum Daily Load for Escherichia coli (E. coli) For the Sugar Creek Watershed, Hancock, Henry, Johnson, Madison, and Shelby Counties*: IDEM Office of Water Quality, April 12, 2007.
>
> "Section 319(h) NPS projects funded under the FFY 2009 grant cycle were highly successful in achieving important water quality benefits to Indiana's surface waters. The following is a summary of best management practices (BMPs) installed during these projects along with the associated estimated load reductions for sediment, phosphorus, and nitrogen:
> **Water Quality and Riparian Zone Restoration**; 5 Filter Strip (393), 1 Riparian Herbaceous Cover, 2 Riparian Forest Buffers, and 3 Grassed Swale and Waterway plantings were also installed along 37 acres of riparian zone, as well as another 30,952 feet of Streambank and Shoreline Protection (580) and Stream Channel Stabilization [using vegetation, I assume], to provide for an additional 2,854 tons/year of sediment, 2,629 lbs/year of phosphorus, and 5,691 lbs/year of nitrogen."
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> Source: *FFY 2009 Annual Report to the U.S. Environmental Protection Agency, Section 319 Nonpoint Source Grant Program;* IDEM Office of Water Quality, September 2009.

It is also shocking that these projects are regularly approved and undertaken with little or no consideration of the **Endangered Species Act** as well as Indiana's own wildlife statutes. Johnson County, and the streams which flow from it, are home to 38 endangered, rare, and threatened species, according to the Indiana Department of Natural Resources.

When riparian trees are threatened by a public-funded project, consideration must be given first of all to the Indiana Bat. The proposed project, and all such projects within Indiana, must be scrutinized for potential harm to that federally-classified endangered specie. Floodplains and riparian zones are prime habitat for the Indiana Bat:

> "Foraging Habitat and Behavior. Indiana bats forage in and around tree canopy of flood plain, riparian, and upland forest. In riparian areas, Indiana bats primarily forage around and near riparian and flood plain trees... and solitary trees and forest edge on the flood plain..."
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> Source: *INDIANA BAT REVISED RECOVERY PLAN.* U.S. Fish and Wildlife Service, March 1999.
>
> "Bats are often closely associated with riparian areas because of their need to drink surface water during evening activity periods, and many species congregate along streams and pools where water is available. Bats also use riparian areas as foraging habitat and movement corridors. For example, summer maternity colonies of Indiana bats are most often located in floodplain deciduous forests or upland stands adjacent to riparian or floodplain forests."
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> Source: *Bat Habitat Restoration and Management Opportunities on Corps of Engineers Projects*. USACE Ecosystem Management and Restoration Research Program, December 2000
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> "Dredging and channelization of riverine habitats to provide for agricultural drainage and flood control has also been cited as a specific threat to Indiana bat summer habitat... Channelization projects can impair bat habitat values directly, through the destruction of riparian vegetation which provides both roosting and foraging habitat for Indiana bats, and indirectly through impacts on water quality and insect production. However, at least some channelized streams that are allowed to revegetate develop "riparian" forests that support Indiana bats; these revegetated channelized streams are an important component of Indiana bat maternity habitat in the agricultural Midwest where forested habitat is limited. Projects to maintain these channelized streams frequently involve removal of second growth vegetation from the banks, which may result in the destruction of summer habitat for maternity colonies..."
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> Source: *Indiana Bat Draft Recovery Plan: First Revision*. U.S. Fish and Wildlife Service, April 2007.

A second category of federally-listed species which exists in the proposed project's watershed are mollusks. The Driftwood Watershed was declared a "Critical Watershed for Protecting Freshwater Biodiversity" by the Nature Conservancy in its 1998 report *Rivers of Life*. Of the several federal or state listed mollusk species supposed to be found in Johnson County (see the attached IDNR list), I have only been able to find reports on one, the rayed bean. Although it has not been found in Canary Creek specifically, there is a small rayed bean population downstream in Sugar Creek, below the mouth of Youngs Creek. The proposed project, as with the proposed Hurricane Creek project, threatens this specie due to the additive effects of decreased water quality, increased sedimentation, etc:

> "Sugar Creek is a tributary of the East Fork White River in the lower Wabash River system in south-central Indiana. A population was first reported there in 1930. Harmon (1992) extensively sampled Sugar Creek, conducting surveys at 27 main stem and 16 tributary sites. He found FD specimens at three main stem sites and relic specimens from two other sites. These sites were consecutive, with the sites with FD material found in the lowermost six miles of stream (from County Route 400 South downstream to Camp Atterbury in Johnson County). The status and viability of this tenuous population is uncertain... Threats to the Sugar Creek rayed bean population are sedimentation and agricultural runoff...

Summary of status and threats:

The present or threatened destruction, modification, or curtailment of its habitat or range. The decline of the rayed bean in the Great Lakes drainages and the Ohio and Tennessee River systems and other mussel species in the eastern United States is primarily the result of habitat loss and degradation... These losses have been well documented since the mid-19th century... Chief among the causes of decline are impoundments, channelization, chemical contaminants, mining, and sedimentation...

Channelization: Dredging and channelization activities have profoundly altered riverine habitats nationwide. Hartfield (1993), Neves et al. (1997), and Watters (2000) reviewed the specific effects of channelization on freshwater mollusks. **Channelization impacts a stream's physical** (e.g., accelerated erosion, reduced depth, decreased habitat diversity, geomorphic instability, riparian canopy loss) **and biological** (e.g., decreased fish and mussel diversity, changed species composition and abundance, decreased biomass, and reduced growth rates) **characteristics**... Channel construction for navigation has been shown to **increase flood heights**... This is partially attributed to a decrease in stream length and increase in gradient... **Flood events may thus be exacerbated, conveying into streams large quantities of sediment**, potentially with adsorbed contaminants. **Channel maintenance may result in profound impacts downstream**... such as **increases in turbidity and sedimentation**, which may smother benthic organisms...

[**Destruction of riparian zones**:] Agricultural sources of chemical contaminants are considerable and include two broad categories: nutrient enrichment (e.g., runoff from livestock farms and feedlots, fertilizers from row crops) and pesticides (e.g., from row crops)... Nitrate concentrations are particularly high in surface waters downstream of agricultural areas... Stream ecosystems are impacted when nutrients are added at concentrations that cannot be assimilated, resulting in over-enrichment, a condition exacerbated by low-flow conditions. Juvenile mussels utilizing interstitial habitats are particularly affected by depleted dissolved oxygen levels resulting from over-enrichment... Because interstitial habitats are also the typical habitat of adult rayed beans, oxygen reductions may also negatively affect them. Increased risks from bacterial and protozoan infections to eggs and glochidia may also pose a threat... Pesticide runoff commonly ends up in streams. The effects of pesticides on laboratory-tested mussels may be particularly profound... and commonly used pesticides have been directly implicated in a North Carolina mussel die-off... Once widely used in parts of the Midwest and Southeast, organochlorine pesticides are still detected in streams and aquatic organisms decades after their use has been banned and may still be found at levels in streams that often exceed chronic-exposure criteria for the protection of aquatic life... Fertilizers and pesticides are also commonly used in developed areas. These contaminants have the potential to impact all extant populations of the rayed bean.

Sedimentation: Siltation and general sedimentation runoff is a pervasive problem in streams and has been implicated in the decline of stream mussel populations... Specific biological impacts on mussels from excessive sediment include reduced feeding and respiratory efficiency from clogged gills, disrupted metabolic processes, reduced growth rates, increased substrate instability, limited burrowing activity, and physical smothering... Studies tend to indicate that the primary impacts of excess sediment on mussels are sublethal, with detrimental effects not immediately apparent... The physical effects of sediment on mussels appear to be multifold, and include changes in suspended and bed material load; bed sediment composition associated with increased sediment production and run-off in the watershed; channel changes in form, position, and degree of stability; changes in depth or the width/depth ratio, which affects light penetration and flow regime; actively aggrading (filling) or degrading (scouring) channels; and changes in channel position that may leave them high and dry...

Interstitial spaces in the substrate provide crucial habitat for juvenile mussels. When clogged, interstitial flow rates and spaces may become reduced... thus reducing juvenile habitat. The habit of the rayed bean in burrowing deep into interstitial substrates makes it more susceptible to degradation of this habitat. **Sediment may act as a vector for delivering contaminants such as nutrients and pesticides to streams.** Juveniles can readily ingest contaminants adsorbed to

silt particles during normal feeding activities... These factors may help explain, in part, why so many mussel populations, including potentially those of the rayed bean, appear to be experiencing recruitment failure...

Agricultural activities produce the most significant amount of sediment that enters streams... Neves et al. (1997) stated that agriculture (including both sediment and chemical run-off) affects 72 % of the impaired river miles in the country.

The inadequacy of existing regulatory mechanisms: ...Existing authorities available to protect riverine ecosystems may not have been fully utilized, such as the **Clean Water Act (CWA)**, administered by the Environmental Protection Agency and the U.S. Army Corps of Engineers. This may have contributed to the general habitat degradation apparent in riverine ecosystems and loss of populations of aquatic species in the Southeast, Midwest, and Northeast...

Past, current, and anticipated conservation activities undertaken for the benefit of the species or its habitat: Management actions (species, habitat, or people management) needed... Following is a summary of the most important aspects of research, surveys, and monitoring needed to recover the rayed bean:

Implement existing laws and regulations: In order for effective recovery to occur, it is critical to the survival of the rayed bean that Federal and State agencies continue to protect its extant populations with those laws and regulations that address protection and conservation of the species and its habitats.

Prioritize Streams & Watersheds: Streams, stream reaches, lakes, and watersheds should be prioritized for protection based on a variety of factors...

Implement Best Management Practices on riparian lands: Maintaining vegetated riparian buffers is a well-known method of reducing stream sedimentation and runoff of chemicals and nutrients. Buffers reduce impacts to fish and other aquatic faunas and are particularly crucial for mussels. Other Best Management Practices should be implemented on riparian lands throughout the range of the rayed bean.

Initiate more habitat restoration programs: More watershed-level, community-based riparian habitat restoration projects should be initiated in high biodiversity streams harboring the rayed bean."

Source: *Status Assessment Report for the rayed bean, Villosa fabalis, occurring in the Mississippi River and Great Lakes systems (U.S. Fish and Wildlife Service Regions 3, 4, and 5, and Canada)*. U.S. Fish and Wildlife Service, September 2002 .

"Federally Listed Aquatic Invertebrate Species Map Narrative - This database includes records I have for the federally endangered clubshell, eastern fanshell, fat pocketbook and rough pigtoe. Also included are records for the official federal candidate species sheepnose and rayed bean...

Each database entry includes the stream, county and latitude/longitude where each species resides, and the best condition it was found. I have only included records where these species have either been found live or as fresh dead shells. These are the areas where there are still populations or at least the best chance for there being populations.

If the federally listed mussel records are mapped, the following sections of the state become important habitat areas: ...**Sugar Creek, Johnson County.**.. Ideally **these entire watersheds should be protected at the highest level**."

Source: *Occurrence of Federally Listed Aquatic Invertebrates in Indiana*. Brant Fisher, IDNR, July 1, 2005.

Besides the adverse effects on our environment, we must also consider projects under the Indiana drainage code in terms of their utility. Through personal inspection and photographic documentation, I have thoroughly established that the recently proposed projects in Johnson County are **entirely without purpose** and have no "necessary economic or social factors" whatsoever. There is absolutely **no justification**, ranging from scientific to economic to aesthetic, for this work to be done. At the site of one project, I began my inspection by speaking with the owner of one of the largest tracts of private property. Every one of his trees, and the trees on neighboring properties, are benefiting not only the property owners, but the entire community. Those trees are stabilizing the banks. Those trees are slowing flood waters. And Surveyor Lechner's primary (and completely idiotic) motivation is to remove the trees! The stream, if not subjected to further destruction by the County Surveyor, is perfectly capable of maintaining itself in all aspects which Surveyor Lechner fraudulently seeks to "maintain" - profile grade, deposits of sediment, and bank stabilization. Surveyor Lechner's methods in fact degrade those aspects! Public funds, particularly "ditch fees", need to be spent on restoring "legal drain" streams in Johnson County which, once restored, should never need "maintenance" again, other than picking up trash or removing invasive species!

I also must point out the utter absurdity of the coincidence of these projects with the city and county efforts to comply with NPDES requirements by forming MS4 stormwater utilities, levying a monthly stormwater fee, and contemplating a variety of public works funded by the fees and/or municipal bonds. Little if any progress can be made in eliminating stormwater runoff pollution under federal and state mandates (which are perfectly reasonable), while at the same time the work is contradicted and nullified by the archaic and completely senseless practices of County Surveyors, as allowed by the Indiana drainage code.

Furthermore, not only are local funds being squandered, but so are state funds, and much more than anything else, federal funds! In relatively small amounts to begin with, such as those going into small watershed management projects such as our local Soil and Water Conservation District's cited above. And there are conflicts with larger initiatives such as the Mississippi River Basin Healthy Watersheds Initiative recently announced by the USDA/NRCS. Yes indeed, Johnson County is within one of the selected critical watersheds, which will receive millions of dollars for improvement over the life of the MRBI – while at the same time, the County Surveyor is using local taxpayer funds to degrade local water bodies!

Getting back to the involvement of IDEM in this situation – and, I will add, the Indiana NRCS office, and the Louisville USACE office, etc. - I will refer you to my comments, and complaints, regarding the aforementioned three recent project applications by the Johnson County Surveyor (by IDEM project number):

2009-628-41-DDC-A (Hurricane Creek)
2009-584-41-DDC-A (Canary Creek)
2009-555-41-DDC-A (Little Sugar Creek)

In each letter of comment, I opposed these projects based on state and federal environmental law and regulation. I have received no response to that as of yet. I also requested a public hearing on each project, and in order to achieve the most benefit for Johnson County citizens, and in order to be the most convenient for IDEM, I suggested that there be one hearing, in Franklin, encompassing all three projects, and that the hearing include an educational component, as IDEM regularly does at events and venues throughout the state when assisting localities with watershed planning.

Those requests were arbitrarily and unreasonably DENIED by IDEM. Which is, at least, a violation of 327 IAC 2-1-2(2). Perhaps that is to be expected due to IDEM's apparent comfort with violations.

Work was begun by the County Surveyor on Franklin Community School Corporation's property on Hurricane Creek last October without authorization, and was only stopped by citizen's complaints. The Surveyor Lechner, who has been in office for over 20 years, claimed to be ignorant of the law, and IDEM has not considered finding him in violation.

Furthermore, when I inspected the Little Sugar Creek site on January 14, I found, and documented with 140 photos – all of which were submitted to IDEM - that work had proceeded months before, apparently during the summer, causing widespread environmental damage, and without authorization! I immediately reported that to IDEM and USACE, and reiterated my complaint in my public comment on the project. According to IDEM's own

regulations, a Notice of Violation should have been promptly issued.

What happened then was that I received a phone call from David Carr. He stated that a my requests for public hearings had been reviewed and denied, and that instead, I was invited to come to the IDEM office and discuss my “concerns.” I replied that I would not be part of a plan to deny the public a transparent process, that I would not take part in a meeting in secret, and that I would complain to the EPA about IDEM's subterfuge.

I then received correspondence in the mail. I emailed Carr a question about that, and while I was at it, I requested a copy of the notice of violation which I assumed had by then been issued to the County Surveyor regarding the violations at the Little Sugar Creek site. In reply, Carr emailed the following:

“IDEM has been onsite with representatives from the Johnson County Surveyors Office on two separate occasions. No violations were observed during the site meetings, therefore, a Notice of Violation letter will not be forthcoming.”

After discussing the matter recently with a Mr. Townsend at USACE Louisville, it is obvious to me that Surveyor Lechner wreaked this destruction in order to pull the following scam: First, he de-stablizes the stream banks by denuding them and removing all of the tree roots which stabilize the banks. Then, he applies for a permit, claiming that work is needed to stabilize the banks! And in this case, adds the baseless claim that the stream “needs” straightening – a process which he began prior to applying for the permit to do so! All of which is apparently accepted and routine practice to IDEM and USACE!

After receiving Carr's email, I promptly phoned IDEM Assistant Commissioner Bruno Pigott and left him a message informing him of this matter. I also replied to the email, copying both **you** and Pigott, stating that I had “sent you over 100 photos of work done without authorization.” I have had no reply from you, Mr. Easterly, or any of your staff. Therefore, you are directly involved in a coverup of these illegal acts. This letter is to accuse you: Commissioner Thomas Easterly; Bruno Pigott, and David Carr of involvement in this coverup, and to demand that state and/or federal officials, who will also receive copies of this letter, investigate.

To summarize my comments on the 2010 Draft 303(d) List of Impaired Waters, and the conflict by Indiana drainage code with the Clean Water Act: Either the State of Indiana must voluntarily eliminate this conflict, or the US Environmental Protection Agency must promptly move to exercise the pre-eminence of the Clean Water Act by enforcing its provisions against the practices allowed by Indiana drainage code.

Sincerely,
Gary W. Moody

cc: EPA, USDA, USACE, FEMA, etc.

Exhibits:
1. Hurricane Creek, 2009-628-41-DDC-A
2. Canary Creek, 2009-584-41-DDC-A
3. Little Sugar Creek, 2009-555-41-DDC-A
4. Letter from David Carr, re 2009-628-41-DDC-A
5. Letter from David Carr, re 2009-584-41-DDC-A
6. Letter from David Carr, re 2009-555-41-DDC-A
7. Subsequent emails between myself and IDEM officials.

EXHIBIT ONE – Hurricane Creek

Riprap/fill placed in creek.

Bulldozed route across creek, with fill.

Fill in bulldozed route.

Riparian area threatened by project.

EXHIBIT TWO – Canary Creek

Mature trees already stabilizing the bank.

Tree seedlings planted as part of SWCD cost-sharing project with property owners.

Existing rip-rap doesn't need work.

Part of suggested methods to restore stream, improve flood control.

EXHIBIT THREE – Little Sugar Creek

Fill placed into denuded bank.

Trees, already stabilizing bank, cut down.

Tree on bank cut down, fill placed in stream.

Route bulldozed through denuded bank, pit dug in denuded elbow across creek.

EXHIBIT FOUR – letter from IDEM re Hurricane Creek

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

February 10, 2010

Mr. Gary W. Moody
299 ½ W. Madison St.
Franklin, IN 46131

Dear Mr. Moody:

Re: Hurricane Legal Drain Maintenance Project
IDEM No.: 2009-628-41-DDC-A
County: Johnson

Thank you for your correspondence regarding the proposed Hurricane Legal Drain Project. Your interest in Indiana's water quality is appreciated.

IDEM placed the project on public notice on December 1, 2009, with a closing date of January 21, 2009. Your request for a public hearing was the only correspondence that IDEM received regarding this project. You expressed your concerns by commenting that Federal Laws hold a hierarchy over State Laws; Indiana Drainage Laws are antiquated, the County Surveyor's projects exacerbate flooding in the county; the proposed project conflicts with Franklin's Comprehensive Plan; the lack of requirements for administering County Surveyor duties, the fundamental difference between the Indiana Drainage Code and the Clean Water Act (CWA)/ 327 IAC 2; the Surveyor's practices degrade water quality; agricultural practices in correlation to County Surveyor projects continually impair Johnson County streams; the use of Local tax dollars to fund Surveyor's projects; the project violates provisions of the CWA and 327 IAC 2; and other issues related to impacts to water quality.

Based on an on-site investigation, IDEM's jurisdiction, review of the application, the authorization of the proposed project by the U.S. Army Corps of Engineers; comments from the U.S. Fish and Wildlife Service, and public comment, we believe we have adequate information to evaluate potential impacts to water quality and aquatic habitat associated with the project. Therefore, IDEM has chosen not to hold a public hearing on the application.

If you have any questions about this letter, contact me at 317-234-6350 or you may contact the Office of Water Quality through the Indiana Department of Environmental Management Helpline (1-800-451-6027).

Sincerely,

David Carr

David Carr
Project Manager
Office of Water Quality

EXHIBIT FIVE – letter from IDEM re Canary Creek

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Commissioner

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Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

February 10, 201

Mr. Gary Moody
299 ½ West Madison Street
Franklin, IN 46131

Dear Mr. Moody:

Re: Canary Legal Drain Maintenance
IDEM No.: 2009-584-41-DDC-A
County: Johnson

Thank you for your letter regarding the proposed Canary Drain Maintenance project. Your interest in Indiana's water quality is appreciated.

IDEM placed the project on public notice on December 15, 2009, with a closing date of January 4, 2009. Your request for a public hearing was one of only two letters IDEM received regarding this project. You expressed your concerns by commenting that Federal Laws hold a hierarchy over State Laws; Indiana Drainage Laws are antiquated; the County Surveyor's projects exacerbate flooding in the county; the proposed project will have adverse impacts to endangered species by not considering impacts to State and Federally endangered species; the proposed project conflicts with Franklin's Comprehensive Plan; the lack of requirements for administering County Surveyor duties; and other issues related to impacts to water quality.

Based on an on-site investigation, IDEM's jurisdiction, review of the application, the authorization of the proposed project by the U.S. Army Corps of Engineers; comments from the U.S. Fish and Wildlife Service, and public comment, we believe we have adequate information to evaluate potential impacts to water quality and aquatic habitat associated with the project. Therefore, IDEM has chosen not to hold a public hearing on the application.

If you have any questions about this letter, contact me at 317-234-6350 or you may contact the Office of Water Quality through the Indiana Department of Environmental Management Helpline (1-800-451-6027).

Sincerely,

David Carr

David Carr
Project Manager
Office of Water Quality

EXHIBIT SIX – letter from IDEM re Little Sugar Creek

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Governor

Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

February 10, 2010

Mr. Gary W. Moody
299 ½ W. Madison St.
Franklin, IN 46131

Dear Mr. Moody:

Re: EM Fisher Legal Drain Relocation Project
IDEM No.: 2009-555-41-DDC-A
County: Johnson

Thank you for your correspondence regarding the proposed EM Fisher Legal Drain (little Sugar Creek) Relocation Project. Your interest in Indiana's water quality is appreciated.

IDEM placed the project on public notice on December 29, 2009, with a closing date of January 19, 2010. You expressed your concerns by commenting that the County Surveyor's project will exacerbate flooding in the county, the proposed project will have adverse impacts to threatened and endangered species, the proposed project would impact the riparian corridors, and other issues related to impacts to water quality.

Based on an on-site investigation, IDEM's jurisdiction, review of the application, the authorization of the proposed project by the U.S. Army Corps of Engineers; comments from the U.S. Fish and Wildlife Service, and public comment, we believe we have adequate information to evaluate potential impacts to water quality and aquatic habitat associated with the project. Therefore, IDEM has chosen not to hold a public hearing on the application.

If you have any questions about this letter, contact me at 317-234-6350 or you may contact the Office of Water Quality through the Indiana Department of Environmental Management Helpline (1-800-451-6027).

Sincerely,

David Carr

David Carr
Project Manager
Office of Water Quality

EXHIBIT SEVEN – subsequent emails between myself and IDEM

> -----Original Message-----
From: Gary [mailto:garyx56@comcast.net]
Sent: Thursday, February 11, 2010 2:28 PM
To: Carr, David
Cc: PIGOTT, BRUNO
Subject: Your letters
>
Mr. Carr:
I've received two form letters from you. One is regarding the Canary Creek project. The other, nearly >identical, is regarding the Little Sugar Creek project. I believe that, in IDEM's haste to deny a reasonable public process to the citizens of Johnson County, that you have confused the latter project with the Hurricane Creek project. Would you please correct and re-send your document. Also, as I requested in my letter about the Little Sugar Creek project, please enclose a copy of the Notice of Violation which has been sent to the Johnson County Surveyor and any other parties involved in the illegal work on Little Sugar Creek.
>
Gary W. Moody
299 1/2 W Madison St
Franklin, IN 46131

On 2/11/2010 3:40 PM, Carr, David wrote:
Mr. Moody,
>
You should have received three letters from IDEM in regard to your requests for public hearing. IDEM mailed >the three letters on February 10, 2010. I have attached the letters for the following projects:
Canary Legal Drain Maintenance 2009-584-41-DDC-A, Hurricane Legal Drain
Maintenance Project 2009-628-41-DDC-A, and EM Fisher Legal Drain Relocation 2009-555-41-DDC-A.
>
You requested a copy of a Notice of Violation letter for the proposed EM Fisher Legal Drain Relocation >Project. IDEM has been onsite with representatives from the Johnson County Surveyors Office on two >separate occasions. No violations were observed during the site meetings, therefore, a Notice of Violation >letter will not be forthcoming.
>
Thank you for your interest in Indiana's Water Quality.
>
Thanks,
>
David Carr
Wetlands Project Manager
>
Indiana Department of Environmental Management
IDEM- Office of Water Quality
100 North Senate Avenue
MC 65-42 IGCN 1255
Indianapolis, IN 46204-2251
>
Phone:(317) 234-6350
Fax: (317) 234-4145
Toll Free: 1-800-451-6027

Subject: Re: Your letters
From: Gary Moody <garyx56@comcast.net>
Date: Thu, 11 Feb 2010 16:35:06 -0500
To: TEASTERL@idem.IN.gov, "Carr, David" <dacarr@idem.IN.gov>
CC: "PIGOTT, BRUNO" <BPIGOTT@idem.IN.gov>
>
I SENT YOU OVER 100 PHOTOGRAPHS OF WORK DONE WITHOUT AUTHORIZATION. CHANGE THE STATEMENT BELOW IMMEDIATELY. - GARY W. MOODY